Statistical Brief

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Perinatal Periods of Risk (PPOR): A Useful Tool for Analyzing Fetal and Infant Mortality

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Introduction

Perinatal Periods of Risk (PPOR) analysis is an approach to investigating and monitoring causes of fetal and infant deaths. This conceptual tool, developed by Dr. Brian McCarthy at the Centers for Disease Control and Prevention (CDC), provides a framework for mapping fetal-infant mortality by birth weight and age at death.

Fetal deaths are stillbirths and infant deaths are deaths less than one year of age to babies born alive. The PPOR methodology includes only fetal deaths of 24 or more weeks gestation. Most states receive reports of fetal deaths only if they are 20 or more weeks gestation.

PPOR analysis is often carried out for a specific county or other local geographic area. Data on fetal and infant deaths can be used to mobilize communities by identifying areas to be targeted for investigation. By investigating the mortality numbers in detail, areas for further analysis can be identified. Given limited resources, this process can also help in prioritizing strategies for prevention efforts.

Improving fetal-infant mortality rates requires the involvement and mobilization of many sectors in the community. When the various partners have been involved at an early stage, they have more ownership and stake in the process. This also leads to the development of better understanding of the problem and can lead to successful consensus-building regarding possible solutions.

The purpose of this paper is to introduce health professionals in North Carolina to the PPOR methodology and to stimulate interest in the examination of additional regional and local data. We looked at statewide data for a three-year period, 2000-2002.

Results

Table 1 maps fetal-infant mortality by birth weight and age at death for 2000-2002. The overall infant mortality rate was 9.9 per 1,000 fetal deaths and live births. There are four major components that comprise this rate, namely deaths related to Maternal Health and Prematurity, Maternal Care, Newborn Care, and Infant Care. These components define broad areas where interventions to reduce fetal-infant mortality might be targeted. These components take into account both the time of death and weight at delivery.

Fetal deaths that are for 24 weeks or greater gestation and weighing 500-1,499 grams, along with the neonatal and postneonatal deaths that weigh 500-1,499 grams at delivery, constitute the Maternal Health and Prematurity subgroup. Neonatal deaths are infant deaths occurring at less than 28 days of age, and postneonatal deaths are infant deaths at 28-364 days of age. The fetal deaths with gestational age of 24 weeks or more and delivery weight more than 1,500 grams make up the Maternal Care

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